## **CLAIMS**

1. Compounds of formula (I),

$$R_4$$
 $R_3$ 
 $N$ 
 $N$ 
 $N$ 
 $R_1$ 
 $R_2$ 
 $R_1$ 
 $R_2$ 

wherein:

10

20

- > R<sub>1</sub> and R<sub>2</sub>, which are the same or different, represent a hydrogen atom or an alkyl group or together with the nitrogen atom carrying them form a heterocycle,
  - ➤ R<sub>3</sub> represents a halogen atom, an alkoxy group, an optionally substituted aryl group or a group NR'<sub>1</sub>R'<sub>2</sub> wherein R'<sub>1</sub> and R'<sub>2</sub>, which are the same or different, represent a hydrogen atom or an alkyl group or together with the nitrogen atom carrying them form a heterocycle,
  - ➤ R<sub>4</sub> represents a hydrogen atom or a group NR"<sub>1</sub>R"<sub>2</sub> wherein R"<sub>1</sub> and R"<sub>2</sub>, which are the same or different, represent a hydrogen atom or an alkyl group or together with the nitrogen atom carrying them form a heterocycle,
- their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base,

it being understood that:

- the term "alkyl" denotes a linear or branched hydrocarbon chain containing from 1 to 8 carbon atoms,
- the term "alkoxy" denotes an alkyl-oxy group wherein the alkyl chain is linear or branched and contains from 1 to 8 carbon atoms,

- the term "aryl" denotes a phenyl or naphthyl group,

5

10

15

- the term "heterocycle" denotes a mono- or bi-cyclic system which contains from 5 to 11 carbon atoms and which may contain, in addition to the nitrogen atom to which R<sub>1</sub>R<sub>2</sub>, R'<sub>1</sub>R'<sub>2</sub> or R"<sub>1</sub>R"<sub>2</sub> are bonded, one or two further hetero atoms selected from oxygen, sulphur and nitrogen, it being possible for the heterocyclic system to be substituted by one, two or three alkyl groups,
- the term "substituted" associated with an aryl group indicates that the phenyl or naphthyl group is substituted by one, two or three identical or different groups selected from halogen atoms and alkyl, alkoxy, polyhaloalkyl and hydroxy groups, "polyhaloalkyl" being understood to be a linear or branched carbon chain containing from 1 to 3 carbon atoms and from 1 to 7 halogen atoms.
- 2. Compounds of formula (I') according to claim 1,

$$R_4$$
 $NH$ 
 $R_1$ 
 $R_3$ 
 $R_1$ 
 $R_2$ 

their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.

- 3. Compounds of formula (I) according to claim 1, wherein NR<sub>1</sub>R<sub>2</sub> represents an NH<sub>2</sub> group, a di-*n*-propylamine group or also a morpholine group, their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.
- 4. Compounds of formula (I') according to claim 2, wherein NR<sub>1</sub>R<sub>2</sub> represents an NH<sub>2</sub> group, a di-n-propylamine group or also a morpholine group, their enantiomers,

diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.

- 5. Compounds of formula (I) according to either claim 1 or claim 3, wherein R<sub>3</sub> represents a 3,4-dimethoxyphenyl, 3,5-dimethylmorpholine, thiomorpholine, azepine, perhydroquinoline or pyrrolidine group or a chlorine atom, their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.
- 6. Compounds of formula (I') according to either claim 2 or claim 4, wherein R<sub>3</sub> represents a 3,4-dimethoxyphenyl, 3,5-dimethylmorpholine, thiomorpholine, azepine, perhydroquinoline or pyrrolidine group or a chlorine atom, their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.
- 7. Compounds of formula (I) according to any one of claims 1, 3 and 5, wherein R<sub>4</sub> represents a hydrogen atom or a morpholine or azepine group, their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid or base.
- 8. Compounds of formula (I') according to any one of claims 2, 4 and 6, wherein R<sub>4</sub> represents a hydrogen atom or a morpholine or azepine group, their enantiomers, diastereoisomers, tautomers and also addition salts thereof with a pharmaceutically acceptable acid.
  - 9. Compound according to claim 1 selected from:

5

10

25

- 2-(dipropylamino)-8-(4-thiomorpholinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,
  - 8-(1-azocanyl)-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,
  - 8-(( $4a\alpha$ , $8a\alpha$ )-octahydro-1(2H)-quinolyl)-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,
  - 8-(( $4a\beta$ , $8a\alpha$ )-octahydro-1(2H)-quinolyl)-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one.
  - 6,8-di(1-azepanyl)-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,

8-(1-azepanyl)-2-(dipropylamino)-6-(4-morpholinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,

8-(1-azepanyl)-2,6-di(4-morpholinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,

2-amino-8- $[(3\alpha,5\beta)$ -3,5-dimethylmorpholinyl]pyrido[3,4-d]pyrimidin-4(3H)-one,

2-amino-8- $[(3\alpha,5\alpha)$ -3,5-dimethylmorpholinyl]pyrido[3,4-d]pyrimidin-4(3H)-one,

8- $[(3\alpha,5\beta)$ -3,5-dimethylmorpholinyl]-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,

8-[ $(3\alpha,5\alpha)$ -3,5-dimethylmorpholinyl]-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,

 $8-[(3\alpha,5\alpha)-3,5-dimethylmorpholinyl]-2-(4-morpholinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,$ 

2-amino-8-(1-azepanyl)-6-(4-morpholinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,

8-chloro-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,

2-(dipropylamino)-8-(1-pyrrolidinyl)pyrido[3,4-d]pyrimidin-4(3H)-one,

and 8-(3,4-dimethoxyphenyl)-2-(dipropylamino)pyrido[3,4-d]pyrimidin-4(3H)-one,

their tautomers and also addition salts thereof with a pharmaceutically acceptable acid.

10. Process for the preparation of compounds of formula (I) according to claim 1, characterised in that there is used as starting material a compound of formula (II):

$$R_4$$
  $R_3$   $NH_2$   $(II),$ 

wherein:

10

15

20

R<sub>3</sub> and R<sub>4</sub> are as defined for formula (I), which is condensed with a compound of formula (III):

$$S = C = N - C(O) OR_{20}$$
 (III),

wherein  $R_{20}$  represents an alkyl or aryl-alkyl group, to yield a compound of formula (IV):

$$R_4$$
 NHC-NH COOR<sub>20</sub> (IV),

wherein:

 $R_3$ ,  $R_4$  and  $R_{20}$  are as defined hereinbefore, which compound of formula (IV) is condensed in the presence of a metallic salt with the amine (V):

$$HN R_1 R_2$$
 (V),

wherein:

5

10

15

20

R<sub>1</sub> and R<sub>2</sub> are as defined for formula (I), to yield a compound of formula (I),

- which may be, where appropriate, purified according to a conventional purification method,
- which is separated, where applicable, into its stereoisomers according to a conventional separation technique,
  - which is converted, if desired, into its addition salts with a pharmaceutically acceptable acid or base.
  - 11. Pharmaceutical composition comprising as active ingredient at least one compound according to any one of claims 1 to 9, alone or in combination with one or more pharmaceutically acceptable, inert, non-toxic excipients or carriers.
  - 12. Pharmaceutical composition according to claim 11, comprising at least one active ingredient according to any one of claims 1 to 9, for use in producing medicaments treating or preventing cancer, non-insulin-dependent, type II diabetes, obesity, hyperlipidaemia, hypercholesterolaemia and cardiovascular complications thereof, arthrosis, arterial hypertension.
  - 13. Pharmaceutical composition according to claim 11, comprising at least one active ingredient according to any one of claims 1 to 9, for use in producing medicaments treating or preventing type II diabetes and cardiovascular complications thereof.

- 14. Pharmaceutical composition according to claim 11, comprising at least one active ingredient according to any one of claims 1 to 9, for use in producing medicaments treating or preventing cancer.
- 15. Pharmaceutical composition according to claim 11, comprising at least one active ingredient according to any one of claims 1 to 9, for use in producing medicaments treating arthrosis.

5

16. Pharmaceutical composition according to claim 11, comprising at least one active ingredient according to any one of claims 1 to 9, for use in producing medicaments treating arterial hypertension.